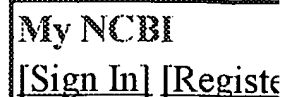
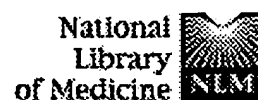


## EAST Search History

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L1	235	(ribosome adj inactivating adj protein)	USPAT	OR	OFF	2006/04/04 16:48
L2	2	L1 near6 Bougainvillea	USPAT	OR	OFF	2006/04/04 16:48



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Text Version

☐ 1: Vepachedu R, Park SW, Sharma N, Vivanco JM Related Articles, Links

☐ Bacterial expression and enzymatic activity analysis of ME1, a ribosome-inactivating protein from *Mirabilis expansa*.  
Protein Expr Purif. 2005 Mar;40(1):142-51.  
PMID: 15721782 [PubMed - indexed for MEDLINE]

☐ 2: Park SW, Vepachedu R, Owens RA, Vivanco JM Related Articles, Links

☐ The N-glycosidase activity of the ribosome-inactivating protein ME1 targets single-stranded regions of nucleic acids independent of sequence or structural motifs.  
J Biol Chem. 2004 Aug 13;279(33):34165-74. Epub 2004 Apr 27.  
PMID: 15123667 [PubMed - indexed for MEDLINE]

☐ 3: Vepachedu R, Bais HP, Vivanco JM Related Articles, Links

☐ Molecular characterization and post-transcriptional regulation of ME1, a type-I ribosome-inactivating protein from *Mirabilis expansa*.  
Planta. 2003 Jul;217(3):498-506. Epub 2003 May 15.  
PMID: 12750888 [PubMed - indexed for MEDLINE]

☐ 4: Park SW, Stevens NM, Vivanco JM Related Articles, Links


☐ Enzymatic specificity of three ribosome-inactivating proteins against fungal ribosomes, and correlation with antifungal activity.  
Planta. 2002 Dec;216(2):227-34. Epub 2002 Aug 21.  
PMID: 12447536 [PubMed - indexed for MEDLINE]

☐ 5: den Hartog MT, Lubelli C, Boon L, Heerkens S, Ortiz Buijsse AP, de Boer M, Stirpe F Related Articles, Links

☐ Cloning and expression of cDNA coding for bouganin.  
Eur J Biochem. 2002 Mar;269(6):1772-9.  
PMID: 11895448 [PubMed - indexed for MEDLINE]

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6: [Bolognesi A, Polito L, Olivieri F, Valbonesi P, Barbieri L, Battelli MG, Carusi MV, Benvenuto E, Del Vecchio Blanco F, Di Maro A, Parente A, Di Loreto M, Stirpe F](#) Related Articles, Links

 New ribosome-inactivating proteins with polynucleotide:adenosine glycosidase and antiviral activities from *Basella rubra* L. and *bougainvillea spectabilis* Willd.  
Planta. 1997 Dec;203(4):422-9.  
PMID: 9421927 [PubMed - indexed for MEDLINE]

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spectral		property data
NEWS 19	MAR 01	INSPEC reloaded and enhanced
NEWS 20	MAR 03	Updates in PATDPA; addition of IPC 8 data without
attributes		
NEWS 21	MAR 08	X.25 communication option no longer available after
June 2006		

NEWS 22 MAR 22 EMBASE is now updated on a daily basis  
 NEWS 23 APR 03 New IPC 8 fields and IPC thesaurus added to  
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L2 ANSWER 1 OF 5 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN  
AN 2004:111302 BIOSIS  
DN PREV200400114874  
TI Type-1 ribosome-inactivating protein.  
AU Stirpe, Fiorenzo [Inventor, Reprint Author]; Bolognesi, Andrea [Inventor]  
CS Bologna, Italy  
ASSIGNEE: Tanox Pharma B.V., Amsterdam, Netherlands  
PI US 6680296 20040120  
SO Official Gazette of the United States Patent and Trademark Office Patents,  
(Jan 20 2004) Vol. 1278, No. 3.  
<http://www.uspto.gov/web/menu/patdata.html>  
. e-file.  
ISSN: 0098-1133 (ISSN print).  
DT Patent  
LA English  
ED Entered STN: 25 Feb 2004  
Last Updated on STN: 25 Feb 2004  
AB The invention relates to a novel ribosome-binding protein derived from  
Bougainvillea speotabilis having a molecular weight of about 26,000  
daltons by polyacrylamide gel electrophoresis under reducing and non-reducing conditions, a ph of about 9.0, and further comprising a  
specified amino-terminal amino acid sequence, as well as to a conjugate of  
said protein with a targeting ligand, such as an antibody, to form an  
immunotoxin. The protein and the conjugate are useful in therapy, for  
example in the control of tumour cells or viruses.

L2 ANSWER 2 OF 5 MEDLINE on STN DUPLICATE 1  
 AN 2002164143 MEDLINE  
 DN PubMed ID: 11895448  
 TI Cloning and expression of cDNA coding for bouganin.  
 AU den Hartog Marcel T; Lubelli Chiara; Boon Louis; Heerkens  
 Sijmie; Ortiz  
 Buijsse Antonio P; de Boer Mark; Stirpe Fiorenzo  
 CS Tanox Pharma B.V., Amsterdam, the Netherlands; Dipartimento di  
 Patologia  
 Sperimentale, Universita di Bologna, Bologna, Italy..  
 mtdenhartog@hotmail.com  
 SO European journal of biochemistry / FEBS, (2002 Mar) Vol. 269,  
 No. 6, pp.  
 1772-9.  
 Journal code: 0107600. ISSN: 0014-2956.  
 CY Germany: Germany, Federal Republic of  
 DT Journal; Article; (JOURNAL ARTICLE)  
 LA English  
 FS Priority Journals  
 OS GENBANK-AF445416  
 EM 200205  
 ED Entered STN: 20020317  
 Last Updated on STN: 20020602  
 Entered Medline: 20020531  
 AB Bouganin is a **ribosome-inactivating protein**  
 that recently was isolated from **Bougainvillea spectabilis** Willd.  
 In this work, the cloning and expression of the cDNA encoding  
 for bouganin  
 is described. From the cDNA, the amino-acid sequence was  
 deduced, which  
 correlated with the primary sequence data obtained by amino-acid  
 sequencing on the native protein. Bouganin is synthesized as a  
 pro-peptide consisting of 305 amino acids, the first 26 of which  
 act as a  
 leader signal while the 29 C-terminal amino acids are cleaved  
 during  
 processing of the molecule. The mature protein consists of 250  
 amino  
 acids. Using the cDNA sequence encoding the mature protein of  
 250 amino  
 acids, a recombinant protein was expressed, purified and  
 characterized.  
 The recombinant molecule had similar activity in a cell-free  
 protein  
 synthesis assay and had comparable toxicity on living cells as  
 compared to  
 the isolated native bouganin.

L2 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1999:27742 CAPLUS  
 DN 130:100646  
 TI Anti-CD40L immunotoxins for the treatment of diseases

IN De Boer, Mark; Den Hartog, Marcel Theodorus  
PA Pangenetics B.V., Neth.  
SO PCT Int. Appl., 31 pp.  
CODEN: PIXXD2

DT Patent  
LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.
DATE			
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PI WO 9858678 19980622	A1	19981230	WO 1998-NL357
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG CA 2294223 19980622	AA	19981230	CA 1998-2294223
AU 9881329 19980622	A1	19990104	AU 1998-81329
EP 1005372 19980622	A1	20000607	EP 1998-931129
EP 1005372 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI	B1	20020102	
AT 211394 19980622	E	20020115	AT 1998-931129
JP 2002507967 19980622	T2	20020312	JP 1999-504212
US 6645494 20000207	B1	20031111	US 2000-446351
PRAI EP 1997-201895 WO 1998-NL357	A W	19970620 19980622	
AB An immunotoxin mol. is described which comprises an antibody specific for human CD40L antigen located on the surface of a human cell, coupled to a toxin mol. or active fragment thereof, wherein the binding of the immunotoxin to the CD40L mol. results in the killing of the CD40L			



expressing cell. The toxin mol. is especially a type-1  
 ribosome-inactivating  
 protein such as bouganin, or an active fragment thereof. The  
 immunotoxin  
 can be used for the treatment of autoimmune diseases such as  
 multiple  
 sclerosis, rheumatoid arthritis and systemic lupus  
 erythematosus, or  
 T-cell malignancies.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN  
 AN 1998:806786 CAPLUS  
 DN 130:62327

TI Type-1 **ribosome-inactivating protein** from  
**Bougainvillea spectabilis** and its use as an immunotoxin  
 IN Stirpe, Fiorenzo; Bolognesi, Andrea  
 PA Pangenetics B.V., Neth.  
 SO PCT Int. Appl., 39 pp.  
 CODEN: PIXXD2

DT Patent  
 LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.
WO 9855623	A1	19981210	WO 1998-NL336
19980608			
W: AU, CA, CN, JP, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE			
CA 2295189	AA	19981210	CA 1998-2295189
19980608			
AU 9880408	A1	19981221	AU 1998-80408
19980608			
EP 975762	A1	20000202	EP 1998-928659
19980608			
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI			
US 6680296	B1	20040120	US 2000-445160
20000310			
US 2004266994	A1	20041230	US 2004-758902
20040116			
PRAI EP 1997-201725	A	19970606	
WO 1998-NL336	W	19980608	
US 2000-445160	A1	20000310	
AB The invention relates to a novel ribosome-binding protein derived from			

Bougainvillea spectabilis having a mol. weight of about 26,000 daltons by

PAGE under reducing and non-reducing conditions, a pI of about 9.0, and

further comprising a specified N-terminal amino acid sequence, as well as

to a conjugate of said protein with a targeting ligand, such as an

antibody, to form an immunotoxin. The type-1 ribosome-binding protein,

referred to as bouganin, was isolated from the leaves of Bougainvillea

spectabilis and shown to have a unique amino acid composition Bouganin

inhibits protein synthesis in the rabbit reticulocyte lysate assay with an

IC50 of  $4.01 \times 10^{-11}$  M, and is not toxic in test animals at a dose

as high as 32 mg/kg. Generation of chemical coupled or fusion proteins of

bouganin with anti-CD80 and anti-CD86 yielded immunotoxin mols. particularly useful to kill cells of a target population. The

protein and

the conjugate are useful in therapy, for example in the control of tumor

cells or viruses.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2006 ACS on STN

AN 1997:784369 CAPLUS

DN 128:58780

TI New ribosome-inactivating proteins with polynucleotide:adenosine glycosidase and antiviral activities from Basella rubra and

Bougainvillea spectabilis

AU Bolognesi, Andrea; Polito, Letizia; Oliviera, Fabiola; Valbonesi, Paola;

Barbieri, Luigi; Battelli, M. Giulia; Carusi, M. Vittoria; Benvenuto,

Eugenio; Del Vecchio Blanco, Francesca; Di Maro, Antimo; Parente, Augusto;

Di Loreto, Mario; Stirpe, Fiorenzo

CS Dipartimento Patologia Sperimentale, Universita Bologna, Bologna, I-40126,

Italy

SO Planta (1997), 203(4), 422-429

CODEN: PLANAB; ISSN: 0032-0935

PB Springer-Verlag

DT Journal

LA English

AB New single-chain (type 1) ribosome-inactivating proteins (RIPs) were

isolated from the seeds of *Basella rubra* (2 proteins) and from the leaves of *Bougainvillea spectabilis* (one protein). These RIPs inhibit protein synthesis both in a cell-free system, with an IC50 (concentration causing 50% inhibition) in the 10<sup>-10</sup> M range, and by various cell lines, with IC50s in the 10<sup>-8</sup>-10<sup>-6</sup> M range. All three RIPs released adenine not only from rat liver ribosomes but also from *Escherichia coli* rRNA, polyadenylic acid, herring sperm DNA, and artichoke mottled crinkle virus (AMCV) genomic RNA, thus being polynucleotide:adenosine glycosidases. The proteins from *Basella rubra* had toxicity to mice similar to that of most type 1 RIPs (Barbieri et al., 1993, *Biochim. Biophys. Acta* 1154, 237-282) with an LD50 (concentration that is 50% lethal) ≤8 mg/kg body weight, while the RIP from *Bougainvillea spectabilis* had an LD50 >32 mg/kg. The N-terminal sequence of the two RIPs from *Basella rubra* had 80-93% identity, whereas it differed from the sequence of the RIP from *Bougainvillea spectabilis*. When tested with antibodies against various RIPs, the RIPs from *Basella* gave some cross-reactivity with sera against dianthin 32, and weak cross-reactivity with momordin I and momorcochin-S, while the RIP from *Bougainvillea* did not cross-react with any antiserum tested. An RIP from *Basella rubra* and one from *Bougainvillea spectabilis* were tested for antiviral activity, and both inhibited infection of *Nicotiana benthamiana* by AMCV.